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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jaeho Kim et al.

Title: CARDIAC CYCLE SYNCHRONIZED SAMPLING OF IMPEDANCE SIGNAL

Docket No.: 279.582US1

Serial No.: 10/612,388

Filed: July 2, 2003

Examiner: Carl H. Layno

Group Art Unit: 3766

**Mail Stop Amendment**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

We are transmitting herewith the following attached items (as indicated with an "X"):

- ☒ Return postcard.
- ☒ Communication Concerning Related Applications (2 pgs.).
- ☒ Information Disclosure Statement (2 pgs.), Form 1449 (3 pgs.), and copies of 11 cited documents.
- ☒ Check in the amount of \$180.00 to cover the fee for consideration of Information Disclosure Statement under 97(c).

Please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

Customer Number 21186

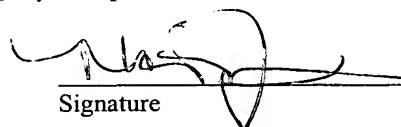
By: 

Atty: Timothy E. Bianchi

Reg. No. 39,610

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Nicole Jack  
Name

  
Signature

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

(GENERAL)



Serial 10/612,388

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jaeho Kim et al. Examiner: Carl H. Layno  
Serial No.: 10/612,388 Group Art Unit: 3766  
Filed: July 2, 2003 Docket: 279.582US1  
Title: CARDIAC CYCLE SYNCHRONIZED SAMPLING OF IMPEDANCE SIGNAL

COMMUNICATION CONCERNING RELATED APPLICATIONS

**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related applications in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date/Issue Date</u>	<u>Attorney Docket</u>	<u>Title</u>
09/032,731 6,076,015	February 27, 1998	279.078US1	RATE ADAPTIVE CARDIAC RHYTHM MANAGEMENT DEVICE USING TRANSTHORACIC IMPEDANCE
09/316,690 6,161,042	May 21, 1999	279.078US2	RATE ADAPTIVE CARDIAC RHYTHM MANAGEMENT DEVICE USING TRANSTHORACIC IMPEDANCE
09/492,912 6,463,326	January 20, 2000	279.078US3	RATE ADAPTIVE CARDIAC RHYTHM MANAGEMENT DEVICE USING TRANSTHORACIC IMPEDANCE
10/319,794	December 13, 2002	279.467US1	RESPIRATION SIGNAL MEASUREMENT APPARATUS, SYSTEMS, AND METHODS
10/359,820 7,062,326	February 6, 2003	279.485US2	METHOD AND APPARATUSES FOR MONITORING HEMODYNAMIC ACTIVITIES USING AN INTRACARDIAC IMPEDANCE DERIVED PARAMETER
10/696,729	October 29, 2003	279.652US1	CROSS-CHECKING OF TRANSTHORACIC IMPEDENCE AND ACCELERATION SIGNALS

COMMUNICATION CONCERNING RELATED APPLICATIONS

Serial Number: 10/612,388

Filing Date: July 2, 2003

Title: CARDIAC CYCLE SYNCHRONIZED SAMPLING OF IMPEDANCE SIGNAL

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Dkt: 279.582US1

Continuations and divisionals may be later filed on the cases listed above, or cited to the Examiner in any previous Communication Concerning Related Applications. Applicants request that the Examiner review all continuations and divisionals of the above-listed or previously-cited patent applications before allowing the claims of the present patent application.

Respectfully submitted,

JAEHO KIM ET AL.

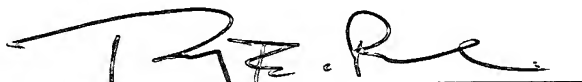
By Applicants' Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
(612) 373-6912

Date

Sep. 29, 2006

By



Timothy E. Bianchi  
Reg. No. 39,610

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Name

Nicole Hea

Signature





US/N 10/612,388

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Jaeho Kim et al.	Examiner:	Carl H. Layno
Serial No.:	10/612,388	Group Art Unit:	3766
Filed:	July 02, 2003	Docket:	279.582US1
Title:	<u>CARDIAC CYCLE SYNCHRONIZED SAMPLING OF IMPEDANCE SIGNAL</u>		

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(c)(2), Applicants have included the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p). Please charge any additional fees or credit any overpayment to Deposit Account No. 19-0743.

INFORMATION DISCLOSURE STATEMENT

Serial No :10/612,388

Filing Date: July 02, 2003

Title: CARDIAC CYCLE SYNCHRONIZED SAMPLING OF IMPEDANCE SIGNAL

Page 2

Dkt: 279.582US1

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications, and Non-Published Applications identifiable by USPTO Serial Number, are no longer required to be provided to the Office. Notification of this change to this effect was provided in the United States Patent and Trademark Office OG Notices dated October 12, 2004 and October 19, 2004. Thus, Applicant has not included copies of any US Patents or US Patent Applications identifiable by serial number that may be cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be directed to Applicant's below-signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

Respectfully submitted,

JAEHO KIM ET AL.


By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
(612) 373-6912

Date Sep. 29, 2006

By   
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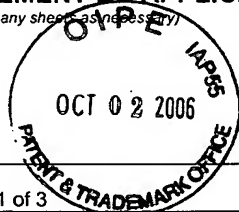
  
Signature

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)



Complete if Known

Application Number	10/612,388
Filing Date	July 2, 2003
First Named Inventor	Kim, Jaeho
Group Art Unit	3766
Examiner Name	Layno, Carl

Sheet 1 of 3

Attorney Docket No: 279.582US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
	US-2003/0105499A1	06/05/2003	Hartley, J. W., et al.	10/08/2002
	US-2003/0114891A1	06/19/2003	Hiebert, J. F., et al.	01/27/2003
	US-2004/0049237A1	03/11/2004	Larson, Dennis E., et al.	07/12/2002
	US-2004/0102908A1	05/27/2004	Larson, D. E., et al.	11/27/2002
	US-2005/0004609A1	01/06/2005	Stahmann, Jeffery E., et al.	07/02/2003
	US-2005/0065443A1	03/24/2005	Ternes, D.	09/22/2003
	US-2005/0096704A1	05/05/2005	Freeberg, S.	10/29/2003
	US-3,593,718	07/20/1971	Krasner, J.	07/13/1967
	US-4,291,699	09/29/1981	Geddes, L. A., et al.	09/21/1978
	US-4,510,944	04/16/1985	Porges, S. W.	12/30/1982
	US-4,519,395	05/28/1985	Hrushesky, W. J.	12/15/1982
	US-4,596,251	06/24/1986	Plicchi, G., et al.	10/10/1984
	US-4,686,987	08/18/1987	Salo, Rodney W., et al.	03/29/1982
	US-4,702,253	10/27/1987	Nappholz, T. A., et al.	10/15/1985
	US-4,722,351	02/02/1988	Phillipps, P. G., et al.	01/31/1986
	US-4,773,401	09/27/1988	Citak, B. P., et al.	08/21/1987
	US-4,781,201	11/01/1988	Wright, J. C., et al.	07/22/1996
	US-4,827,935	05/09/1989	Geddes, et al.	04/24/1986
	US-4,830,008	05/16/1989	Meer,	02/16/1988
	US-4,858,611	08/22/1989	Elliott, C. D.	06/03/1987
	US-4,901,725	02/20/1990	Nappholz, T. A., et al.	01/29/1988
	US-4,930,518	06/05/1990	Hrushesky, W. J.	09/26/1988
	US-4,960,129	10/02/1990	dePaola, Robert, et al.	12/05/1988
	US-4,966,146	10/30/1990	Webb, S. C., et al.	01/11/1989
	US-5,014,698	05/14/1991	Cohen, T. J.	10/02/1989
	US-5,063,927	11/12/1991	Webb, S. C., et al.	02/16/1989
	US-5,074,303	12/24/1991	Hauck, J. A.	03/08/1990
	US-5,137,019	08/11/1992	Pederson, B. D., et al.	03/01/1991
	US-5,156,147	10/20/1992	Warren, J. A., et al.	02/05/1991
	US-5,179,946	01/19/1993	Weiss, Steven M.	11/26/1990
	US-5,197,467	03/30/1993	Steinhaus, B. M., et al.	06/22/1992
	US-5,201,808	04/13/1993	Steinhaus, B. M., et al.	02/10/1992
	US-5,249,572	10/05/1993	Bonnet, J.-L.	12/23/1991
	US-5,269,301	12/14/1993	Cohen, T. J.	10/19/1992
	US-5,271,395	12/21/1993	Wahlstrand, John D., et al.	04/17/1992
	US-5,273,034	12/28/1993	Nilsson, Kenth-Ake-Sune	04/22/1992
	US-5,284,136	02/08/1994	Hauck, John A., et al.	05/13/1991
	US-5,300,093	04/05/1994	Koestner, K., et al.	09/14/1992
	US-5,303,702	04/19/1994	Bonnet, J.-L., et al.	12/23/1991
	US-5,318,597	06/07/1994	Hauck, J. A., et al.	03/15/1993

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

\* EXAMINER: In col. of reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

<b>Application Number</b>	10/612,388
<b>Filing Date</b>	July 2, 2003
<b>First Named Inventor</b>	Kim, Jaeho
<b>Group Art Unit</b>	3766
<b>Examiner Name</b>	Layno, Carl

Sheet 2 of 3

Attorney Docket No: 279.582US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
	US-5,341,811	08/30/1994	Cano, G. G.	03/26/1991
	US-5,379,776	01/10/1995	Murphy, A. J., et al.	12/01/1993
	US-5,391,190	02/21/1995	Pederson, B. D., et al.	04/07/1992
	US-5,423,870	06/13/1995	Olive, Arthur L., et al.	11/22/1993
	US-5,441,524	08/15/1995	Rueter, et al.	08/30/1993
	US-5,469,859	11/28/1995	Tsoglin, A., et al.	06/24/1993
	US-5,507,785	04/16/1996	Deno, Don C.	12/21/1994
	US-5,522,860	06/04/1996	Molin, R. D., et al.	12/23/1994
	US-5,524,632	06/11/1996	Stein, et al.	05/19/1995
	US-5,531,772	07/02/1996	Prutchi, David	11/18/1994
	US-5,540,733	07/30/1996	Testerman, Roy L., et al.	09/21/1994
	US-5,562,712	10/08/1996	Steinhaus, Bruce, et al.	11/25/1994
	US-5,626,622	05/06/1997	Cooper, D.	09/21/1994
	US-5,626,624	05/06/1997	Schaldach, Max, et al.	09/16/1993
	US-5,685,316	11/11/1997	Schookin, Sergei I., et al.	04/08/1996
	US-5,718,720	02/17/1998	Prutchi, D., et al.	12/13/1996
	US-5,722,997	03/03/1998	Nedungadi, A. P., et al.	09/17/1996
	US-5,755,742	05/26/1998	Schuelke, R. J., et al.	11/05/1996
	US-5,792,194	08/11/1998	Morra,	09/27/1996
	US-5,792,208	08/19/1998	Gray,	06/30/1997
	US-5,800,470	09/01/1998	Stein, Paul M., et al.	03/11/1996
	US-5,817,135	10/06/1998	Cooper, D., et al.	05/02/1997
	US-5,817,136	10/06/1998	Nappholz, T. A., et al.	05/02/1997
	US-5,824,020	10/20/1998	Cooper, D.	05/02/1997
	US-5,824,029	10/20/1998	Weijand, K. J., et al.	04/28/1994
	US-5,836,976	11/17/1998	Min, X., et al.	04/30/1997
	US-5,921,940	07/13/1999	Verrier, R. L., et al.	11/04/1997
	US-5,935,081	08/10/1999	Kadhiresan, V. A.	01/20/1998
	US-5,987,356	11/16/1999	DeGroot, P. J.	08/12/1998
	US-6,015,388	01/18/2000	Sackner, M. A., et al.	03/17/1998
	US-6,021,351	02/01/2000	Kadhiresan, V. A., et al.	06/25/1999
	US-6,022,322	02/08/2000	Prutchi, David	02/06/1998
	US-6,026,320	02/15/2000	Carlson, G. M., et al.	06/08/1998
	US-6,044,294	03/28/2000	Mortazavi, S., et al.	12/13/1996
	US-6,073,048	06/06/2000	Kieval, R. S., et al.	11/17/1995
	US-6,135,970	10/24/2000	Kadhiresan, V. A., et al.	12/07/1999
	US-6,161,042	12/12/2000	Hartley, Jesse W., et al.	05/21/1999
	US-6,358,201	03/19/2002	Childre, Doc L., et al.	03/02/1999
	US-6,370,424	04/09/2002	Prutchi, David	12/14/1999
	US-6,415,183	07/02/2002	Scheiner, A., et al.	12/09/1999

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

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<b>Application Number</b>	10/612,388
<b>Filing Date</b>	July 2, 2003
<b>First Named Inventor</b>	Kim, Jaeho
<b>Group Art Unit</b>	3766
<b>Examiner Name</b>	Layno, Carl

Sheet 3 of 3

Attorney Docket No: 279.582US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
	US-6,449,509	09/10/2002	Park, Euljoon	08/30/2000
	US-6,459,929	10/01/2002	Hopper, Donald, et al.	04/12/2000
	US-6,463,326	10/08/2002	Hartley, J. W., et al.	01/20/2000
	US-6,480,733	11/12/2002	Turcott, R.	12/17/1999
	US-6,522,914	02/18/2003	Huvelle, Etienne	07/14/2000
	US-6,529,772	03/04/2003	Carlson, Gerrard M., et al.	06/25/2001
	US-6,647,289	11/11/2003	Prutchi, D.	12/06/2001
	US-7,062,326	06/13/2006	Huvelle, E., et al.	02/06/2003
	US-7,101,339	09/05/2006	Daum, D. R., et al.	12/13/2002

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T <sup>2</sup>
	DE-2805482-With English Abstract	03/05/1987	Hofmann, G. H.	
	EP-0003567-With English Abstract	08/22/1979	Hofmann, Gerhard H.	
	EP-0555988-With English Abstract	08/18/1993	Steinhaus, Bruce M., et al.	
	EP-0709058A1	01/05/1996	Alessandri, N.	
	EP-0447024A2	09/18/1991	Hauck, John A.	
	EP-0702977A2	03/27/1996	Testerman, Roy L.	
	EP-0765632A2	04/02/1997	Addiss, R. R.	
	FR-2305168-English Abstract Only	10/22/1976	Milleret, M.	
	WO-94/06512A1-With English Abstract	03/31/1994	Schaldach, Max	
	WO-98/14240	04/09/1998	Strandberg, H., et al.	

**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		HAUCK, JOHN A., "A Minute Ventilation Sensor Derived from Intra-thoracic Electric Impedance as a Cardiac Pacemaker Rate Modulator", <u>University of Minnesota Master Thesis</u> , (June 1993), Pages 80-86 & 97	

**EXAMINER****DATE CONSIDERED**

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